Complete Summary

GUIDELINE TITLE

Risk assessment and prevention of pressure ulcers.

BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Risk assessment and prevention of pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 56 p. [44 references]

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Pressure ulcers

GUIDELINE CATEGORY

Management
Prevention
Risk Assessment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Nursing
Physical Medicine and Rehabilitation
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

- To present nursing best practice guidelines for risk assessment and prevention of pressure ulcers
- To assist nurses who work in diverse practice settings to identify adults who are at risk of pressure ulcers and provide direction to nurses in defining early interventions for prevention, and to manage Stage I pressure ulcers

TARGET POPULATION

Adults from diverse practice settings who are at risk of developing pressure ulcers

INTERVENTIONS AND PRACTICES CONSIDERED

Risk Assessment

1. Skin assessment with particular attention to bony prominences
2. Assessment of a client´s risk for the development of pressure ulcers using the "Braden Scale for Predicting Pressure Sore Risk"
3. Identification and staging of all pressure ulcers using the National Pressure Ulcer Advisory Panel (NPUAP) criteria
4. Assessment for pressure, friction and shear in all positions and during lifting, turning and repositioning
5. Documentation of assessment/reassessment

Prevention

1. Planning: Individualized care planning according to identified risk factors, in collaboration with the client, significant others and health care professionals; use of clinical judgment to interpret risk 3.1
2. Pressure reducing/relieving equipment (e.g. special mattress; pillows or foam wedges; devices that relieve pressure on heels)
3. Avoidance of products that localize pressure
4. Positioning/repositioning (e.g. use of schedule; postural alignment; devices allowing independent positioning; head of bed positioning)
5. Avoidance of massage over bony prominences
6. Measures to control pain
7. Bathing schedule/measures to minimize irritation to skin, drying, force, friction
8. Measures to re-hydrate dry skin and improve resistance to injury
9. Measures to reduce friction injuries (e.g. lubricating moisturizers and creams, protective dressings or protective padding)
10. Measures to reduce excessive moisture or incontinence
11. Measures to deal with any suspected nutritional deficit (consultation with registered dietician, diet and nutritional support)
12. Rehabilitation program as indicated
13. Discharge/Transfer of Care Arrangements
14. Education, organization, and policy approaches and strategies

MAJOR OUTCOMES CONSIDERED

- Factors that predict risk for pressure ulcers
- Incidence and prevalence of pressure ulcers

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer identified a set of five (5) existing guidelines for the prevention of pressure ulcers. After evaluation of the five guidelines (see "Methods Used to Assess Quality and Strength of the Evidence" and "Rating Scheme for the Strength of the Evidence" fields), the panel selected the following two guidelines to adapt and modify:

- Agency for Health Care Policy and Research (AHCPR) (1992). Pressure ulcers in adults: Prediction and prevention. Clinical Practice Guideline, Number 3. AHCPR Publication Number 92-0047. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, U.S. Department of Health and Human Services.
- Clinical Resource Efficiency and Support Team (CREST) (1998). Guidelines for the Prevention and Management of Pressure Sores. Belfast, Northern Ireland: CREST Secretariat.

An additional review of systematic review articles and pertinent literature was conducted to update the existing guidelines.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Guideline Appraisal

Five guidelines were evaluated using the "Appraisal Instrument for Canadian Clinical Practice Guidelines," an adapted tool referenced in the original guideline document.

Levels of Evidence

Strength of Evidence A: Requires at least one randomized controlled trial as part of the body of literature of overall quality and consistency addressing the specific recommendations.

Strength of Evidence B: Requires availability of well conducted clinical studies but no randomized clinical trials on the topic of recommendations.

Strength of Evidence C: Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

In January 2000, a panel of clinicians, educators and researchers with expertise in the practice and research of pressure ulcers from institutional, community and academic settings was convened under the auspices of the Registered Nurses Association of Ontario (RNAO).

The panel subsequently selected the following two guidelines to adapt and modify: Agency for Health Care Policy and Research (AHCPR) (1992), Pressure ulcers in adults: Prediction and prevention and Clinical Resource Efficiency and Support Team (CREST) (1998), Guidelines for the prevention and management of pressure sores. An additional review of systematic review articles and pertinent literature was conducted to update the existing guidelines. The scope of this guideline and the focus on risk assessment and prevention of pressure ulcers in adults was established. Through a process of discussion and consensus, recommendations for nursing care were developed.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing
External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The final draft was submitted to a set of external stakeholders for review and feedback (see Appendix A in the original guideline document for stakeholder profile). The completed nursing best practice guideline was further refined after a pilot implementation phase in selected practice settings in Ontario (see "Acknowledgement" in the original guideline document for a listing of implementation sites). Pilot implementation practice settings were identified through a "request for proposal" process conducted by Registered Nurses Association of Ontario (RNAO).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the strength of evidence (Levels A-C) are repeated at the end of the Major Recommendations.

Substantive Recommendations

Assessment

Recommendation 1.1

A head to toe skin assessment should be carried out with all clients at admission, transfer of care, and any time there is a change in health status. Particular attention should be paid to bony prominences.

(Strength of Evidence = C)

Recommendation 1.2

Assessment of a client´s risk for the development of pressure ulcers is recommended using the "Braden Scale for Predicting Pressure Sore Risk." Interventions should be based on Braden´s categories (sensory perception, mobility, activity, moisture, nutrition, friction and shear), rather than a total score. In some specific cases, where population specific risk assessment tools are available and tested for validity and reliability, these can be used for assessment.

(Strength of Evidence = C)

Recommendation 1.3

All pressure ulcers are identified and staged using the National Pressure Ulcer Advisory Panel (NPUAP) criteria.

(Strength of Evidence = C)

Recommendation 1.4

Clients who are restricted to bed and/or chair should be assessed for pressure, friction and shear in all positions and during lifting, turning and repositioning.

(Strength of Evidence = C)

Recommendation 1.5

All data should be documented at the time of assessment and reassessment.

(Strength of Evidence = C)

Planning

Recommendation 2.1

Assessment directs the individualized plan of care according to identified risk factors, in collaboration with the client, significant others and health care professionals.

(Strength of Evidence = C)

Recommendation 2.2

The nurse uses clinical judgment to interpret risk in the context of the full client profile (age, acuity of illness, co-morbidity, medications, psychosocial well being, surface support, posture, clothing) and the client´s goals.

(Strength of Evidence = C)

Interventions

Recommendation 3.1

For clients with identified risk, minimize pressure through the immediate use of pressure reducing/relieving equipment and/or a repositioning schedule.

(Strength of Evidence = C)

Recommendation 3.2

No client at risk of developing a pressure ulcer should receive care on a standard mattress. A replacement mattress with low interface pressure such as high-density foam should be used.

(Strength of Evidence = A)

Recommendation 3.3

For individuals restricted to bed:

- Use devices to enable independent positioning, lifting and self-transfers (e.g. trapeze, transfer board, bed rails).
- Reposition at least every 2 hours or sooner if high risk.
- Use pillows or foam wedges to avoid contact between bony prominences.
- Use devices that totally relieve pressure on the heels.
- Avoid positioning directly on the trochanter. A 30 degree turn to either side is recommended.
- Maintain head of the bed at the lowest elevation consistent with medical conditions and restrictions in order to reduce shearing forces. A 30 degree elevation or lower is recommended.
- Use lifting devices to move rather than drag individuals during transfer and position changes.
- Do not use donut type devices or products that localize pressure to a new area.
- Use a written plan of care.

(Strength of Evidence = C)

Recommendation 3.4

For individuals restricted to chair:

- Have the client shift weight every 15 minutes, if able.
- Reposition at least every hour if unable to weight shift.
- Use pressure-reducing devices for seating surfaces.
- Do not use donut type devices or products that localize pressure to other areas.
- Consider postural alignment, distribution of weight, balance and stability, and pressure reduction when positioning individuals using chairs or wheelchairs.
- Refer to Occupational Therapy/Physiotherapy (OT/PT) for seating assessment and adaptations for special needs.
- Use a written plan of care.

(Strength of Evidence = C)

Recommendation 3.5

Use proper positioning, transferring, and turning techniques. Consult Occupational Therapy/Physiotherapy (OT/PT) regarding transfer techniques and devices to reduce friction and shear and optimize client independence whenever there is a change in health status.

(Strength of Evidence = C)

Recommendation 3.6

Avoid massage over bony prominences.

(Strength of Evidence = B)

Recommendation 3.7

Consider the impact of pain on mobility and activity. Pain control measures may include effective medication, therapeutic positioning, support surfaces, and other pain-relieving choices. Monitor level of pain on an on-going basis. Consider other therapeutic modalities (transcutaneous electrical nerve stimulation [TENS]).

(Strength of Evidence = C)

Recommendation 3.8

Individualize the bathing schedule according to need and client preferences. Avoid hot water and use a mild cleansing agent to minimize irritation and drying of the skin. Minimize force and friction applied to skin.

(Strength of Evidence = C)

Recommendation 3.9

Minimize environmental factors such as low humidity and cold air. Use effective moisturizers to re-hydrate dry skin and improve resistance to injury.

(Strength of Evidence = C)

Recommendation 3.10

Use lubricating moisturizers and creams, protective dressings (e.g. transparent films, hydrocolloids) or protective padding to reduce friction injuries.

(Strength of Evidence = C)

Recommendation 3.11

If there is excessive moisture or incontinence:

- Gently cleanse skin at time of soiling.
- Minimize skin exposure to excess moisture. Assess and treat urinary incontinence. When moisture cannot be controlled, use underpads or briefs that are absorbent and provide a quick-drying surface next to the skin.
- Topical agents that act as barriers to moisture can also be used.
- If unresolved skin irritation exists in a moist area, consult with the physician for evaluation and topical treatment.
- For managing continence, refer to Nurse Continence Specialists and the National Guideline Clearinghouse (NGC) guideline summary of the RNAO Nursing Best Practice Guideline (2002) Promoting Continence Using Prompted Voiding.

(Strength of Evidence = C)

Recommendation 3.12

If a nutritional deficit is suspected:

- Consult with registered dietitian.
- Investigate factors that compromise an apparently well nourished individual's dietary intake (especially protein or calories) and offer him or her support with eating.
- Plan and implement a nutritional support and/or supplementation program for nutritionally compromised individuals.
- If dietary intake remains inadequate and if consistent with overall goals of care, more effective nutritional interventions such as enteral or parenteral feedings should be considered.

(Strength of Evidence = C)

Recommendation 3.13

Institute a rehabilitation program, if consistent with the overall goals of care and the potential exists for improving the individual's mobility and activity status. Consult the care team regarding a rehabilitation program.

(Strength of Evidence = C)

Discharge/Transfer of Care Arrangements

Recommendation 4.1

Advance notice should be given when transferring a client between settings (e.g. hospital to home/nursing home/hospice/residential care) if pressure-reducing/relieving equipment is required to be in place at time of transfer, e.g. pressure relieving mattresses, seating, special transfer equipment. Transfer to another setting may require a site visit, client/family conference, and/or assessment for funding of resources to prevent the development of pressure ulcers.

(Strength of Evidence = C)

Recommendation 4.2

Clients moving between care settings should have the following information provided:

- Risk factors identified
- Details of pressure points and skin condition prior to discharge
- Type of bed/mattress the client requires
- Type of seating the client requires
- Details of healed ulcers
- Stage, site and size of existing ulcers
- History of ulcers, previous treatments and dressings (generic) used
- Type of dressing currently used and frequency of change

- Any allergies to dressing products
- Need for on-going nutritional support

(Strength of Evidence = C)

Recommendation 4.3

Recommend the use of the RNAO Nursing Best Practice Guideline 2002 "Risk Assessment and Prevention of Pressure Ulcers."

(Strength of Evidence = C)

Educational Recommendations

Recommendation 5.1

Educational programs for the prevention of pressure ulcers should be structured, organized, and comprehensive and directed at all levels of health care providers, clients, and family or caregivers.

(Strength of Evidence = A)

Recommendation 5.2

The educational program for prevention of pressure ulcers should include information on the following items:

- The etiology and risk factors predisposing to pressure ulcer development
- The Braden Risk Assessment Scale (6 categories to identify risk) and their relevance to planning care
- Skin assessment
- Staging of pressure ulcers
- Selection and/or use of support surfaces
- Development and implementation of an individualized skin care program
- Demonstration of positioning/transferring techniques to decrease risk of tissue breakdown
- Instruction on accurate documentation of pertinent data

(Strength of Evidence = B)

Recommendation 5.3

The educational program should identify those persons responsible for pressure ulcer prevention and include a description of each person´s role. The level of information and mode of delivery should be appropriate to the audience and include an outline of each person´s expected participation. The educational program should be updated on a regular basis to incorporate new and existing techniques or technologies.

(Strength of Evidence = C)

Recommendation 5.4

Educational programs should be developed, implemented, and evaluated using principles of adult learning. Programs must have built-in mechanisms such as quality assurance standards and audits to evaluate their effectiveness in preventing pressure ulcers.

(Strength of Evidence = C)

Contextual Recommendations

Recommendation 6.1

Guidelines are more likely to be effective if they take into account local circumstances and are disseminated by an ongoing educational and training program.

(Strength of Evidence = C)

Recommendation 6.2

Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the "Toolkit for implementing clinical practice guidelines," based on available evidence, theoretical perspectives and consensus. The Toolkit is recommended for guiding the implementation of the RNAO nursing best practice guideline on "Risk Assessment and Prevention of Pressure Ulcers."

(Strength of Evidence = C)

Recommendation 6.3

Organizations need a policy with respect to providing and requesting advance notice when transferring or admitting clients between practice settings when special needs (e.g., surfaces) are required.

(Strength of Evidence = C)

Recommendation 6.4

Organizations need to ensure that resources are available to clients and staff, e.g., appropriate moisturizers, barriers, access to equipment, therapists, etc.

(Strength of Evidence = C)

Recommendation 7.1

Risk should be periodically reassessed. Care should be modified according to the identified risk factors. Frequency of reassessment depends on client status and institutional policy.

(Strength of Evidence = C)

Recommendation 7.2

Interventions and outcomes should be monitored and documented using prevalence and incidence type measures.

(Strength of Evidence = C)

Recommendation 7.3

Audits of strategies for the prevention of pressure ulcers may focus on three different groups: a) Client Audit; b) Agency Audit; and c) Community Audit.

(Strength of Evidence = C)

Definitions:

Levels of Evidence

Strength of Evidence A: Requires at least one randomized controlled trial as part of the body of literature of overall quality and consistency addressing the specific recommendations.

Strength of Evidence B: Requires availability of well conducted clinical studies but no randomized clinical trials on the topic of recommendations.

Strength of Evidence C: Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is specifically stated for each recommendation (see "Major Recommendations").

Recommendations were based on a review of existing guidelines, additional systematic review articles, pertinent literature, and consensus opinion.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- This best practice guideline (BPG) assists nurses who work in diverse practice settings to identify adults who are at risk of pressure ulcers.
- The best practice guideline further provides direction to nurses in defining early interventions for prevention, and to manage Stage I pressure ulcers.
- Guideline implementation is intended to decrease the incidence of pressure ulcers.
- Nurses, other health care professionals and administrators who are leading and facilitating practice changes will find this document valuable for the development of policies, procedures, protocols, educational programs, assessment and documentation tools, etc.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These best practice guidelines are related only to nursing practice and not intended to take into account fiscal efficiencies. These guidelines are not binding for nurses and their use should be flexible to accommodate client/family wishes and local circumstances. They neither constitute a liability or discharge from liability. While every effort has been made to ensure the accuracy of the contents at the time of publication, neither the authors nor Registered Nurses Association of Ontario (RNAO) give any guarantee as to the accuracy of the information contained in them nor accept any liability, with respect to loss, damage, injury or expense arising from any such errors or omission in the contents of this work. Any reference throughout the document to specific pharmaceutical products as examples does not imply endorsement of any of these products.
- The RNAO development panel (2000) strongly acknowledges that successful pressure ulcer prevention requires an interdisciplinary team effort. Nurses, working in partnership with the interdisciplinary health care team and individuals at risk for pressure ulcers, have an important role in risk assessment and prevention. The panel recognizes however that prevention and management of pressure ulcers are intertwined in practice, and therefore recommends the use of the RNAO Nursing Best Practice Guideline Assessment and Management of Pressure Ulcers in conjunction with this guideline.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Toolkit: Implementing Clinical Practice Guidelines

Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. In this regard, Registered Nurses Association of Ontario (RNAO) (through a panel of nurses, researchers and administrators) has developed The Toolkit for Implementing Clinical Practice Guidelines, based on available evidence, theoretical perspectives and consensus. The Toolkit is recommended for guiding the implementation of any clinical practice guideline in a health care organization.

The "Toolkit" provides step by step directions to individuals and groups involved in planning, coordinating, and facilitating the guideline implementation. Specifically, the "Toolkit" addresses the following key steps:

1. Identifying a well-developed, evidence-based clinical practice guideline
2. Identification, assessment and engagement of stakeholders
3. Assessment of environmental readiness for guideline implementation
4. Identifying and planning evidence-based implementation strategies
5. Planning and implementing evaluation
6. Identifying and securing required resources for implementation

Implementing guidelines in practice that result in successful practice changes and positive clinical impact is a complex undertaking. The "Toolkit" is one key resource for managing this process.

For specific recommendations regarding implementation of this guideline, refer to the "Major Recommendations" field.

Quick Reference Guides

- Braden Scale for Predicting Pressure sore Risk (See Appendix C in the original guideline document)
- Pressure Reduction and Pressure Relief (See Appendix D in the original guideline document)
- RNAO Risk Assessment and Prevention of Pressure Ulcers: Quick Reference Guide (See Appendix F in the original guideline document)

Evaluation and Monitoring of Guideline

Refer to recommendations 7.1, 7.2, and 7.3 in the Major Recommendations field.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Risk assessment and prevention of pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 56 p. [44 references]

ADAPTATION

The Registered Nurses Association of Ontario (RNAO) panel selected the following two guidelines to adapt and modify for the current guideline:

- Agency for Health Care Policy and Research (AHCPR) (1992). Pressure ulcers in adults: Prediction and prevention. Clinical Practice Guideline, Number 3. AHCPR Publication Number 92-0047. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, U.S. Department of Health and Human Services.
- Clinical Resource Efficiency and Support Team (CREST) (1998). Guidelines for the Prevention and Management of Pressure Sores. Belfast, Northern Ireland: CREST Secretariat.

DATE RELEASED

2002 Jan

GUIDELINE DEVELOPER(S)

Registered Nurses Association of Ontario - Professional Association

SOURCE(S) OF FUNDING

Funding was provided by the Ontario Ministry of Health and Long Term Care.

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The Registered Nurses Association of Ontario (RNAO) received funding from the Ministry of Health and Long-Term Care (MOHLTC). This guideline was developed by a panel of nurses and researchers convened by the RNAO and conducting its work independent of any bias or influence from the MOHLTC.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Quick reference guide. Braden scale for predicting pressure sore risk. Appendix C. In: Risk assessment and prevention of pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 56 p.
- Quick reference guide. Pressure reduction and pressure relief. Appendix D. In: Risk assessment and prevention of pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 56 p.
- Quick reference guide. RNAO Risk assessment and prevention of pressure ulcers. Appendix F. In: Risk assessment and prevention of pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 56 p.

  Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

- Toolkit: implementation of clinical practice guidelines. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 91 p.

  Electronic copies: Available in Portable Document Format (PDF) from the RNAO Web site

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

PATIENT RESOURCES

The following is available:

- Health information fact sheet. Taking the pressure off: preventing pressure ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2003 Nov. 2 p.

Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on December 17, 2003. The information was verified by the guideline developer on January 16, 2004.

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Date Modified: 11/15/2004